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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------------|------------------|
| 09/670,250 | 09/26/2000 | Mitchell S. Cohen | YOR920000440US1 (590.024) | 5891 |
| 35195 | 7590 | 03/23/2005 | EXAMINER ROJAS, OMAR R | |
| FERENCE & ASSOCIATES 400 BROAD STREET PITTSBURGH, PA 15143 | | | ART UNIT 2874 | PAPER NUMBER |

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/670,250

Applicant(s)

COHEN ET'AL

Examiner

Omar Rojas

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-30 is/are pending in the application.
- 4a) Of the above claim(s) 23-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-8, 10, 12-14 and 22 is/are rejected.
- 7) ☒ Claim(s) 4, 11 and 15-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Detailed Action.

DETAILED ACTION ✓

Election/Restrictions

1. Applicant's election with traverse of Group I (claims 1-8 and 10-22) in the reply filed on March 14, 2005 is acknowledged. The traversal is on the ground(s) that "there is no asserted basis for the assertion that each group is a patentably distinct species of the claimed invention" and that "claims of both Groups I and II should be examined at the same time under MPEP § 803." This is not found persuasive because nowhere in the response to the restriction requirement have applicants asserted that the inventions are NOT patentably distinct.

Therefore, the requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

4. Claim 6 recites the limitation "said at least one waveguide is etched from at least one glass sheet" in the claim. There is insufficient antecedent basis for this limitation in the claim because the specification discloses that the method for forming the bent optical fiber is different from the method for forming the bent optical waveguide (e.g., compare the steps on page 7, lines 3-18 with the steps on pages 12-14). Applicant(s) have not disclosed that the different steps are interchangeable for both the optical fiber and the waveguide. Thus, claim 6 lacks antecedent basis.

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5. Because of its indefiniteness, claim 6 has not been examined for patentability purposes.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1-3, 5, 8, 12-14, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Patent No. 4,856,864 to Campbell et al. (“Campbell”).**

Regarding claim 1, Campbell discloses an apparatus for guiding at least one optical light path (e.g., see Fig. 74 reprinted below), said apparatus comprising:

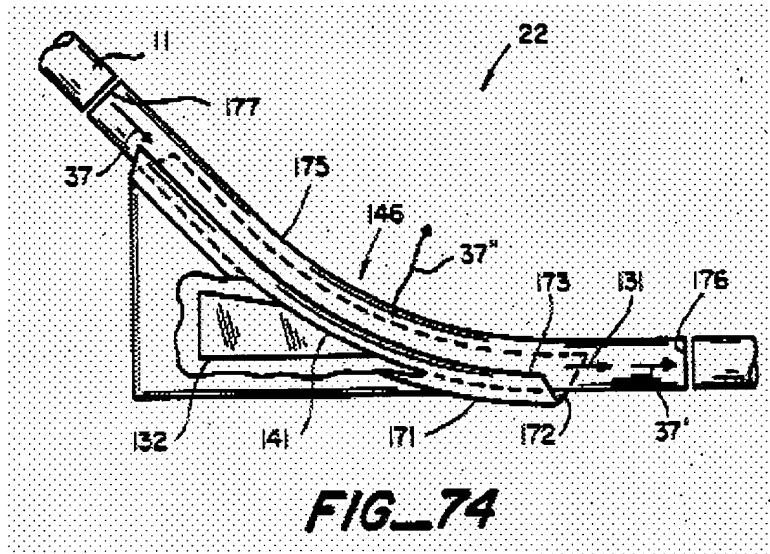
an input and output interface;

at least one continuous optical fiber (175) having a constant core diameter being disposed between the input and output interfaces,

said optical fiber adapted (175) adapted to provide at least one optical path;

said optical fiber (175) having at least one bent element (146) adapted to avoid premature mechanical failure;

where said at least one bent element (146) includes a bending radius of less than about 2.5 mm (see column 12, lines 20-24).



Regarding claim 2, the optical fiber (175) of Campbell is an optoelectronic fiber as well.

Regarding claim 3, the optoelectronic fiber (175) of Campbell is inherently integrally adhered (e.g., by splicing) to the input and output interfaces via fiber ends (176 and 177).

Regarding claim 5, the bent element (146) of Campbell is an optical waveguide.

Regarding claim 8, as seen in Figure 4, Campbell discloses read and write taps (22 and 23) for receiving and transmitting optical signals. These taps may each comprise the coupler of Figure 74.

Regarding claims 12-14 and 22, the invention of Campbell also reads on the claimed method in view of the previous remarks.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell as applied to claim 1 above.

Regarding claims 7 and 10, the previous remarks concerning Campbell are incorporated herein.

Campbell also discloses at least one V-shaped groove (171) inherently made of silicon material. Thus, Campbell only differs from claims 7 and 10 in that Campbell does not teach that his V-shaped groove (171) extends all the way to the input and output interfaces of the optical fiber (175).

However, modifying Campbell so that his V-shaped groove (171) extends all the way to the input and output interfaces shown in Figure 74 would have been obvious to one of ordinary skill in the art at the time of the claimed invention. This is because one of ordinary skill would have been motivated to make such a modification in Campbell in order to more completely secure and protect the optical fiber (175).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention specified by claims 7 and 10 in view of Campbell.

Allowable Subject Matter

10. Claims 4, 11, and 15-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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11. The following is a statement of reasons for the indication of allowable subject matter: Regarding claim 11, there is no teaching in Campbell for, nor does an additional teaching suggest, a base element and a cover element combining to form an input and output interface as recited by claim 11. Regarding claim 4, Campbell does not disclose using baking to adhere the optical fiber to the input and output interfaces. It is the position of this examiner that it would not have been obvious to provide the use of baking in Campbell for this purpose. Similarly, it would not have been obvious to use the baking step recited by claim 15 in Campbell either. Thus, claims 4, 11, and claims 15-21 are considered patentable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Rojas whose telephone number is (571) 272-2357. The examiner can normally be reached on Monday-Friday (7:00AM-3:00PM).

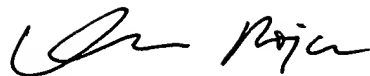
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick, can be reached on (571) 272-2344. The official facsimile number for regular and After Final communications is (703) 872-9306. The examiner's RightFAX number is (571) 273-2357.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read "Omar Rojas", is positioned above the printed name.

Omar Rojas
Patent Examiner
Art Unit 2874

or

March 21, 2005